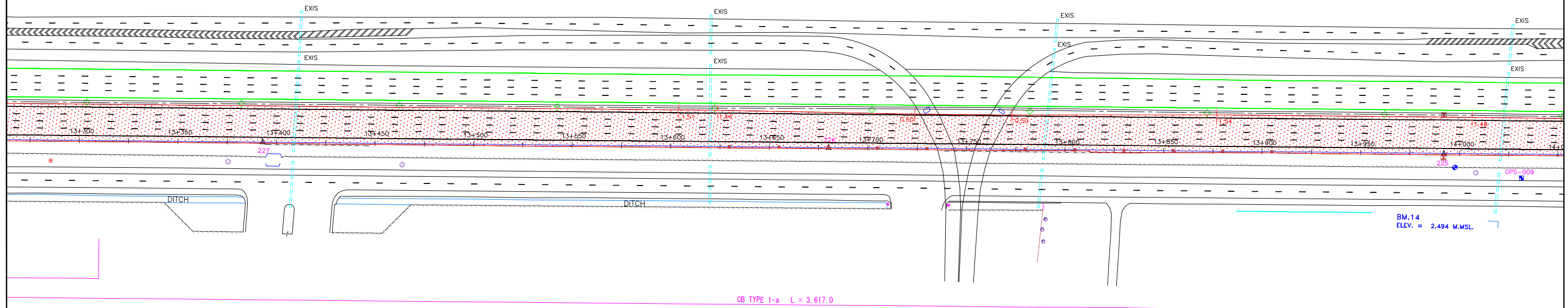
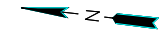


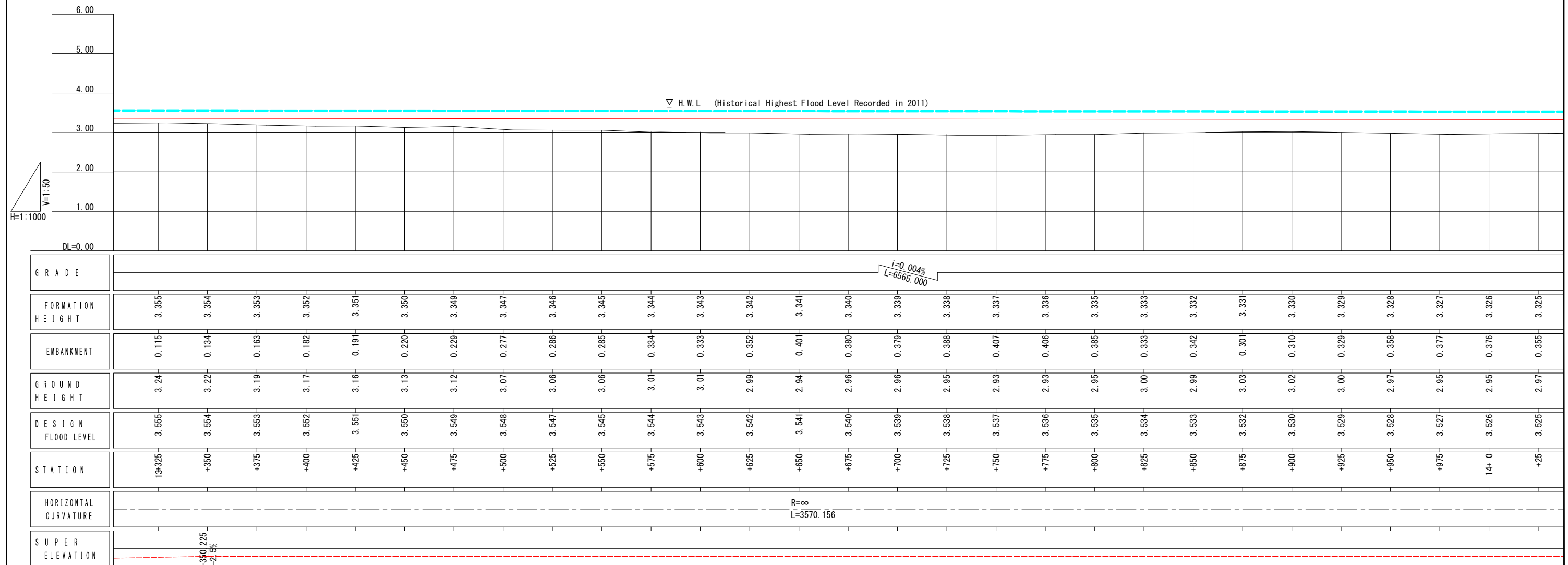
CONTROL POINTS :

STA.	N	E	ELEV.
225	1556969.663	683045.692	2.971
226	1557280.134	683013.094	2.961
227	1557565.613	682983.241	3.165



CB TYPE 1-a L = 3,617.0

RAISING PLAN - 1 SECTION



▽ H.W.L. (Historical Highest Flood Level Recorded in 2011)

H=1:1000
V=1:50

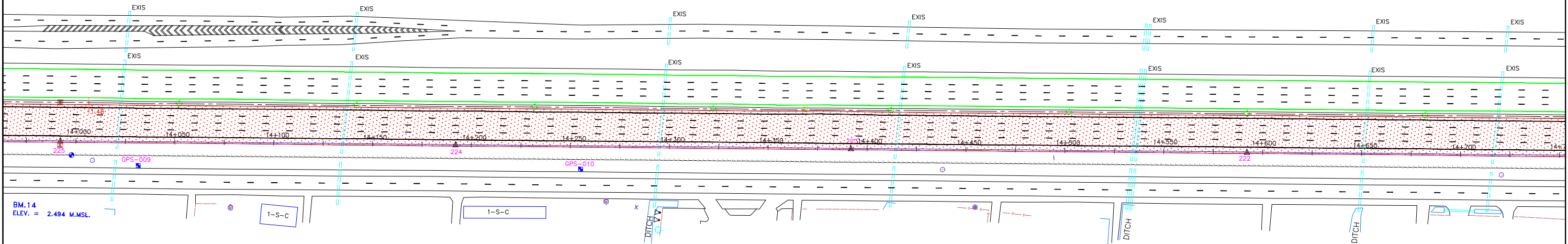
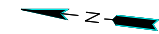
DL=0.00

GRADE	i=0.004% L=6565.000																												
FORMATION HEIGHT	3.355	3.354	3.353	3.352	3.351	3.350	3.349	3.347	3.346	3.345	3.344	3.343	3.342	3.341	3.340	3.339	3.338	3.337	3.336	3.335	3.333	3.332	3.331	3.330	3.329	3.328	3.327	3.326	3.325
EMBANKMENT	0.115	0.134	0.163	0.182	0.191	0.220	0.229	0.277	0.286	0.285	0.334	0.333	0.352	0.401	0.380	0.379	0.388	0.407	0.406	0.385	0.333	0.342	0.301	0.310	0.329	0.358	0.377	0.376	0.355
GROUND HEIGHT	3.24	3.22	3.19	3.17	3.16	3.13	3.12	3.07	3.06	3.06	3.01	3.01	2.99	2.94	2.96	2.96	2.95	2.93	2.93	2.95	3.00	2.99	3.03	3.02	3.00	2.97	2.95	2.95	2.97
DESIGN FLOOD LEVEL	3.555	3.554	3.553	3.552	3.551	3.550	3.549	3.548	3.547	3.545	3.544	3.543	3.542	3.541	3.540	3.539	3.538	3.537	3.536	3.535	3.534	3.533	3.532	3.530	3.529	3.528	3.527	3.526	3.525
STATION	13+325	+350	+375	+400	+425	+450	+475	+500	+525	+550	+575	+600	+625	+650	+675	+700	+725	+750	+775	+800	+825	+850	+875	+900	+925	+950	+975	14+0	+25
HORIZONTAL CURVATURE														R=∞ L=3570.156															
SUPER ELEVATION	+350.225 -2.5%																												

REV. NO.	DESCRIPTION	ENGINEER		DOH		REV. NO.	APPROVED BY	KINGDOM OF THAILAND MINISTRY OF TRANSPORT DEPARTMENT OF HIGHWAYS	HIGHWAY ROUTE NO. 9		OWNER The Inter-City Motorways Division Department of Highways Ministry of Transport	PROJECT TITLE The Preparatory Survey on the Rehabilitation Project of the Outer Bangkok Ring Road	CTI ENGINEERING INTERNATIONAL CO., LTD. ORIENTAL CONSULTANTS CO., LTD. NIPPON KOEI CO., LTD. CTI ENGINEERING CO., LTD.	DESIGNED BY SAGARA Hidetaka ROAD ENGINEER	CHECKED BY WATANABE Ryohei CHIEF ENGINEER	DATE :	SCALE :
		CHECKED	DATE	CHECKED	DATE				KM. 13+300	TO KM. 14+000						AUGUST 2012	V=1/50 H=1/1000
																DWG. NO.	SHEET NO.
																MW-26	31

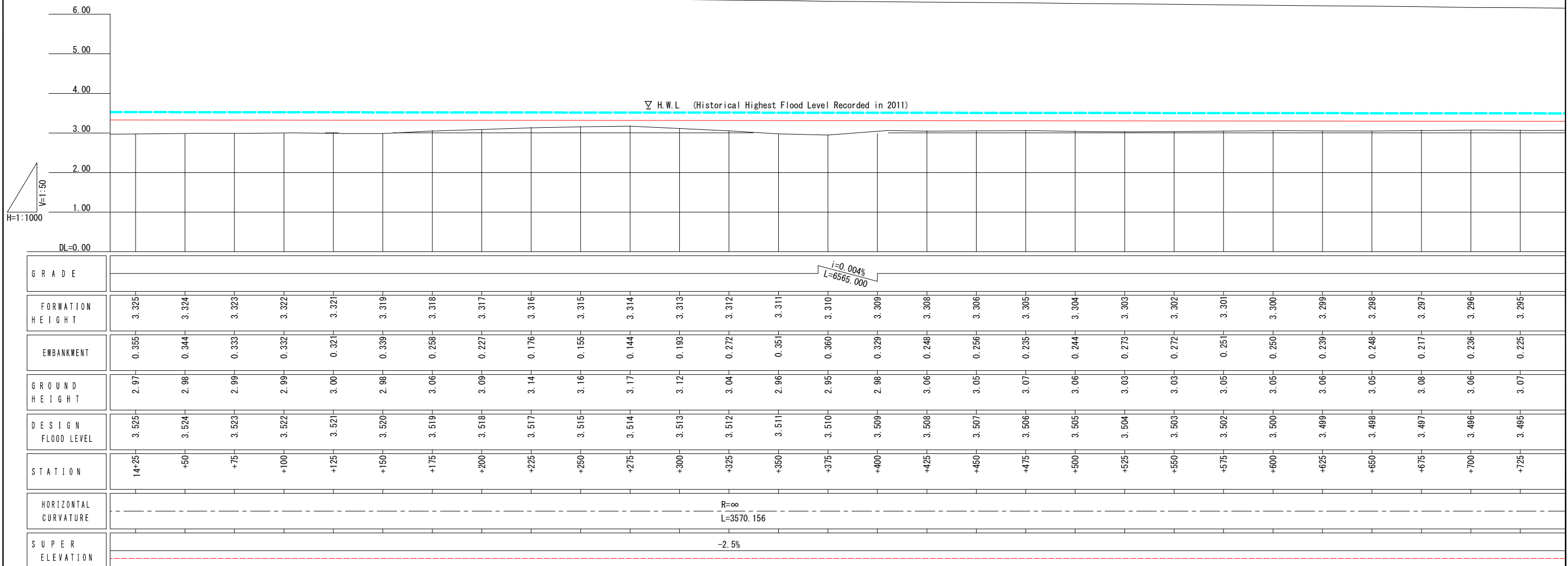
CONTROL POINTS :

STA.	N	E	ELEV.
GPS-009	1556929.187	683037.893	2.459
GPS-010	1556706.801	683061.625	2.599
222	1556373.106	683108.404	3.057
223	1556572.224	683087.385	3.034
224	1556770.993	683066.544	3.142



CB TYPE 1-a L = 3,617.0

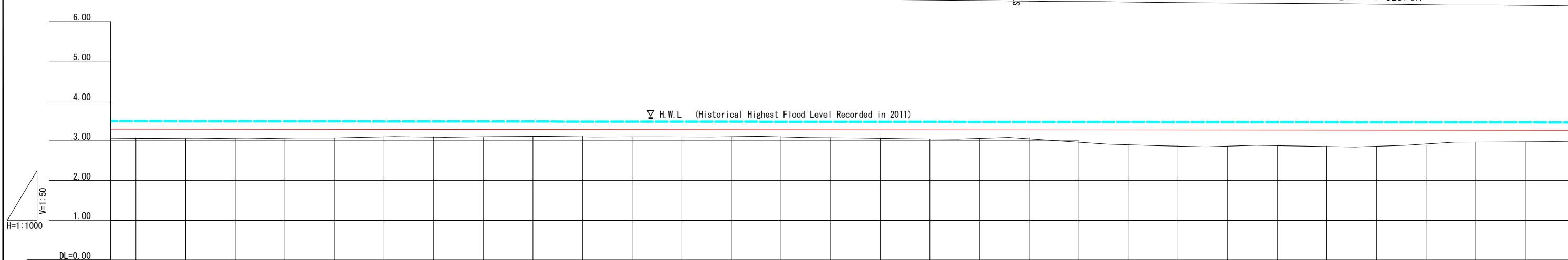
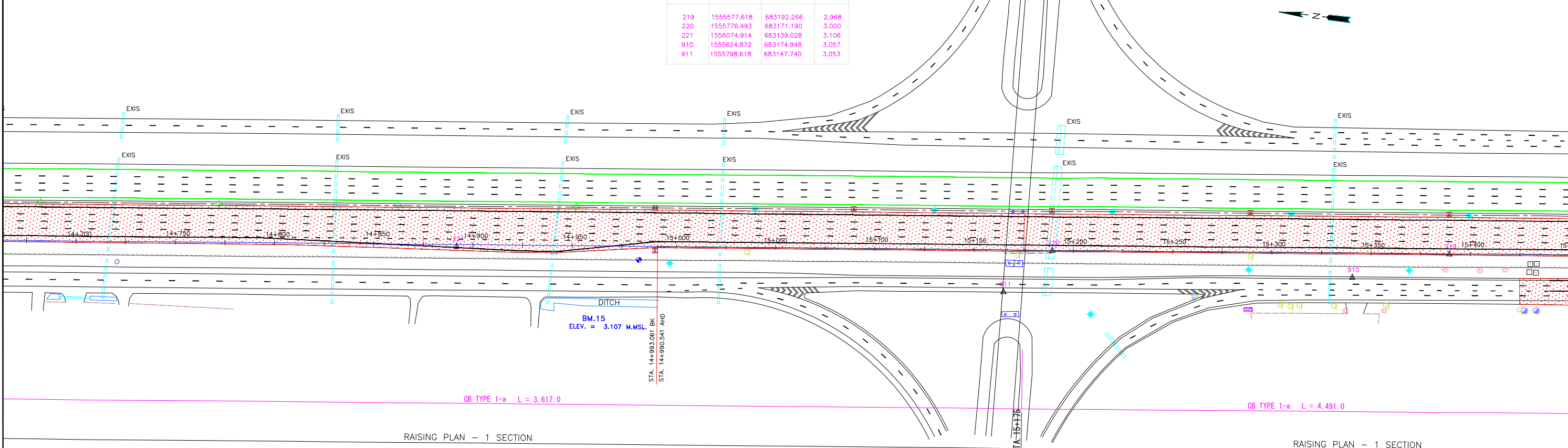
RAISING PLAN - 1 SECTION



REV. NO.	DESCRIPTION	ENGINEER CHECKED	ENGINEER DATE	DOH CHECKED	DOH DATE	REV. NO.	APPROVED BY	<p>KINGDOM OF THAILAND MINISTRY OF TRANSPORT DEPARTMENT OF HIGHWAYS</p>	HIGHWAY ROUTE NO. 9	OWNER	PROJECT TITLE	<p>CTI ENGINEERING INTERNATIONAL CO., LTD. ORIENTAL CONSULTANTS CO., LTD. NIPPON KOEI CO., LTD. CTI ENGINEERING CO., LTD.</p>	DESIGNED BY	CHECKED BY	DATE	SCALE
									PLAN & PROFILE (21 / 43) KM. 14+000 TO KM. 14+700	The Inter-City Motorways Division Department of Highways Ministry of Transport	The Preparatory Survey on the Rehabilitation Project of the Outer Bangkok Ring Road		SAGARA Hidetaka ROAD ENGINEER	WATANABE Ryohei CHIEF ENGINEER	AUGUST 2012	V=1/50 H=1/1000
																DWG. NO.

MW-27 32

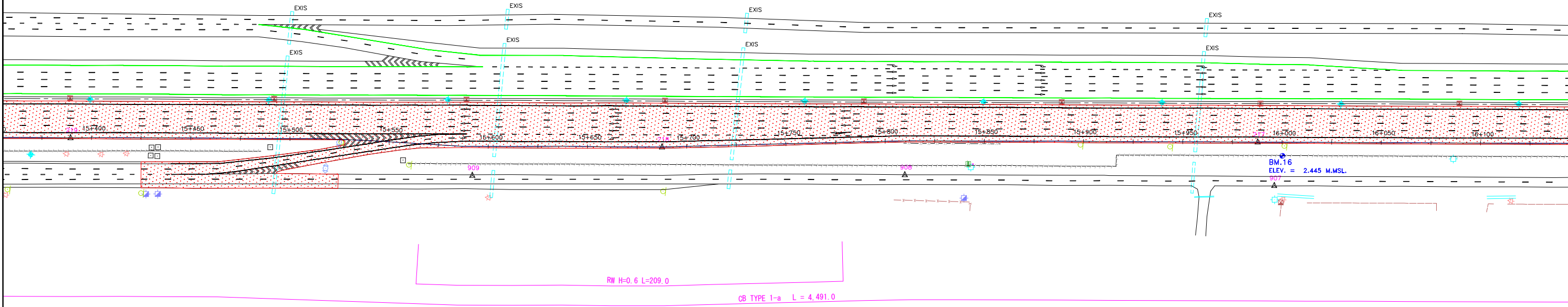
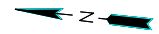
219	1555577.618	683192.266	2.968
220	1555776.493	683171.190	3.000
221	1556074.914	683139.028	3.106
910	1555624.872	683174.948	3.057
911	1555798.618	683147.740	3.053



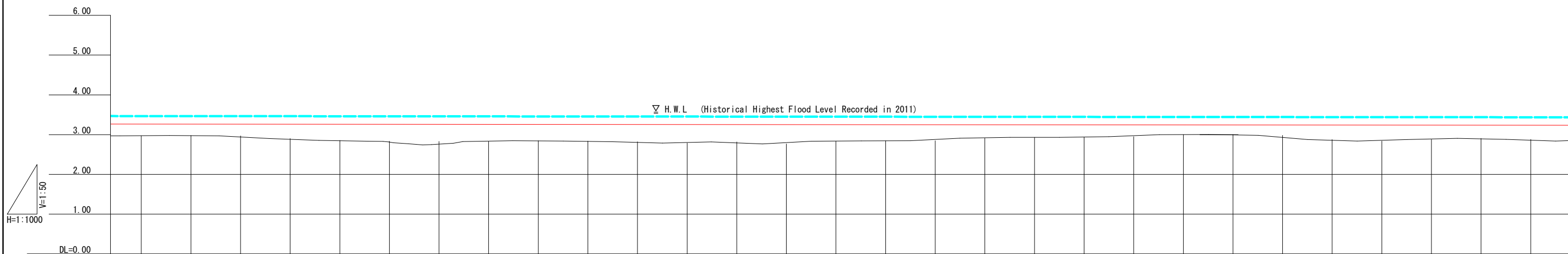
GRADE	i=0.004% L=6565.000																												
FORMATION HEIGHT	3.295	3.294	3.292	3.291	3.290	3.289	3.288	3.287	3.286	3.285	3.284	3.283	3.282	3.281	3.280	3.278	3.277	3.276	3.275	3.274	3.273	3.272	3.271	3.270	3.269	3.268	3.267	3.266	3.264
EMBANKMENT	0.225	0.234	0.222	0.241	0.210	0.179	0.178	0.197	0.176	0.165	0.184	0.183	0.182	0.161	0.200	0.208	0.227	0.236	0.185	0.274	0.353	0.392	0.421	0.380	0.399	0.428	0.377	0.296	0.294
GROUND HEIGHT	3.07	3.06	3.07	3.05	3.08	3.11	3.11	3.09	3.11	3.12	3.10	3.10	3.10	3.12	3.08	3.07	3.05	3.04	3.09	3.00	2.92	2.88	2.85	2.80	2.87	2.84	2.89	2.97	2.97
DESIGN FLOOD LEVEL	3.495	3.494	3.493	3.492	3.491	3.490	3.489	3.488	3.487	3.486	3.484	3.483	3.482	3.481	3.480	3.479	3.478	3.477	3.476	3.475	3.474	3.473	3.472	3.471	3.469	3.468	3.467	3.466	3.465
STATION	14+725	+750	+775	+800	+825	+850	+875	+900	+925	+950	+975	15+0	+25	+50	+75	+100	+125	+150	+175	+200	+225	+250	+275	+300	+325	+350	+375	+400	+425
HORIZONTAL CURVATURE																	R=∞ L=3570.156												
SUPER ELEVATION																	-2.5%												

CONTROL POINTS :

STA.	N	E	ELEV.
217	1554982.775	683255.042	2.983
218	1555280.829	683219.994	2.786
907	1554972.068	683234.150	2.660
908	1555157.714	683219.368	2.687
909	1555374.331	683195.383	2.986



SECTION RAISING PLAN - 1 SECTION



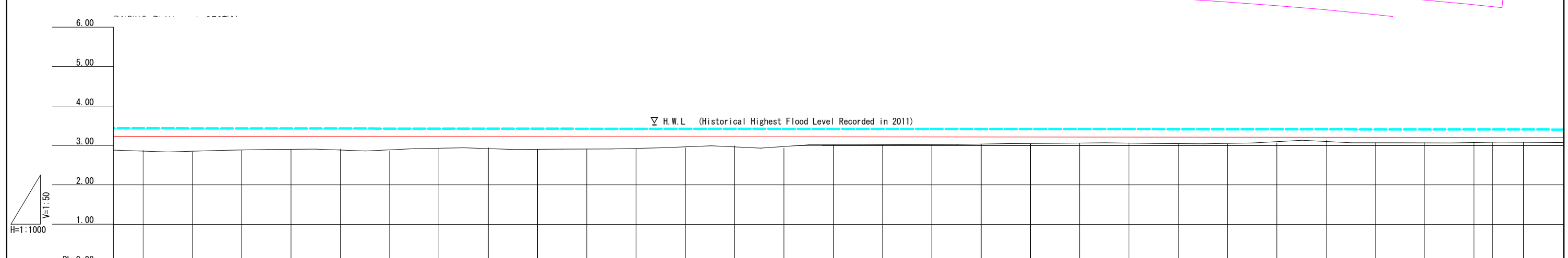
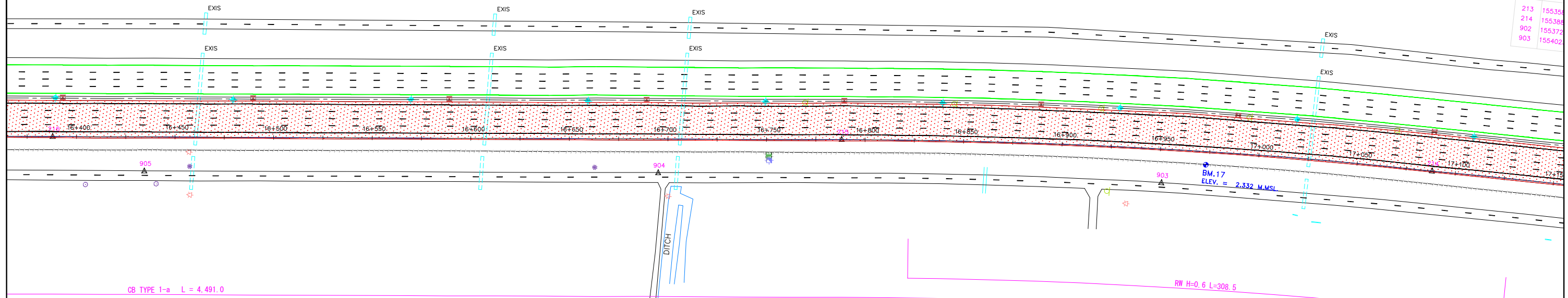
GRADE	i=0.004% L=6565.000																												
FORMATION HEIGHT	3.264	3.263	3.262	3.261	3.260	3.259	3.258	3.257	3.256	3.255	3.254	3.253	3.252	3.250	3.249	3.248	3.247	3.246	3.245	3.244	3.243	3.242	3.241	3.240	3.239	3.238	3.236	3.235	3.234
EMBANKMENT	0.294	0.283	0.292	0.361	0.410	0.419	0.428	0.427	0.406	0.415	0.434	0.463	0.432	0.480	0.419	0.408	0.397	0.336	0.315	0.314	0.293	0.242	0.241	0.260	0.369	0.398	0.356	0.325	0.354
GROUND HEIGHT	2.97	2.98	2.97	2.90	2.85	2.84	2.83	2.83	2.85	2.84	2.82	2.79	2.82	2.77	2.83	2.84	2.85	2.91	2.93	2.93	2.95	3.00	3.00	2.98	2.87	2.84	2.88	2.91	2.88
DESIGN FLOOD LEVEL	3.465	3.464	3.463	3.462	3.461	3.460	3.459	3.458	3.457	3.456	3.454	3.453	3.452	3.451	3.450	3.449	3.448	3.447	3.446	3.445	3.444	3.443	3.442	3.441	3.439	3.438	3.437	3.436	3.435
STATION	15+425	+450	+475	+500	+525	+550	+575	+600	+625	+650	+675	+700	+725	+750	+775	+800	+825	+850	+875	+900	+925	+950	+975	16+0	+25	+50	+75	+100	+125
HORIZONTAL CURVATURE																R=∞ L=3570.156													
SUPER ELEVATION																-2.5%													

CONTROL POINTS :

STA.	N	E	ELEV.
215	1554186.750	683338.788	3.062
216	1554584.746	683296.889	2.941
904	1554277.437	683311.871	2.610
905	1554536.621	683284.517	2.715
906	1554771.571	683259.834	2.758

CONTROL

STA.	N	E	ELEV.
213	1553584.746	683296.889	2.941
214	1553884.746	683296.889	2.941
902	1553777.437	683311.871	2.610
903	1554077.437	683311.871	2.610



GRADE	i=0.004% L=6565.000																												
FORMATION HEIGHT	3.234	3.233	3.232	3.231	3.230	3.229	3.228	3.227	3.226	3.225	3.224	3.222	3.221	3.220	3.219	3.218	3.217	3.216	3.215	3.214	3.213	3.212	3.211	3.210	3.208	3.207	3.206	3.205	3.204
EMBANKMENT	0.354	0.393	0.362	0.331	0.320	0.369	0.308	0.287	0.326	0.315	0.314	0.282	0.231	0.290	0.199	0.198	0.197	0.196	0.165	0.154	0.143	0.162	0.171	0.140	0.078	0.137	0.136	0.145	0.205
GROUND HEIGHT	2.88	2.84	2.87	2.90	2.91	2.86	2.92	2.94	2.90	2.91	2.91	2.94	2.99	2.93	3.02	3.02	3.02	3.02	3.05	3.06	3.07	3.05	3.04	3.07	3.13	3.07	3.07	3.06	3.07
DESIGN FLOOD LEVEL	3.435	3.434	3.433	3.432	3.431	3.430	3.429	3.428	3.427	3.426	3.424	3.423	3.422	3.421	3.420	3.419	3.418	3.417	3.416	3.415	3.414	3.413	3.412	3.411	3.410	3.408	3.407	3.406	3.405
STATION	16+125	+150	+175	+200	+225	+250	+275	+300	+325	+350	+375	+400	+425	+450	+475	+500	+525	+550	+575	+600	+625	+650	+675	+700	+725	+750	+775	+800	+825
HORIZONTAL CURVATURE	R=∞ L=3570.156																												
SUPER ELEVATION	-2.5%																												

REV. NO.	DESCRIPTION	ENGINEER CHECKED	ENGINEER DATE	DOH CHECKED	DOH DATE	REV. NO.	APPROVED BY



KINGDOM OF THAILAND
MINISTRY OF TRANSPORT
DEPARTMENT OF HIGHWAYS

HIGHWAY ROUTE NO. 9
OWNER
The Inter-City Motorways Division
Department of Highways
Ministry of Transport

PROJECT TITLE
The Preparatory Survey on
the Rehabilitation Project of
the Outer Bangkok Ring Road

CTI ENGINEERING INTERNATIONAL CO., LTD.
ORIENTAL CONSULTANTS CO., LTD.
NIPPON KOEI CO., LTD.
CTI ENGINEERING CO., LTD.

DESIGNED BY
SAGARA Hidetaka
ROAD ENGINEER

CHECKED BY
WATANABE Ryohei
CHIEF ENGINEER

DATE :
AUGUST 2012

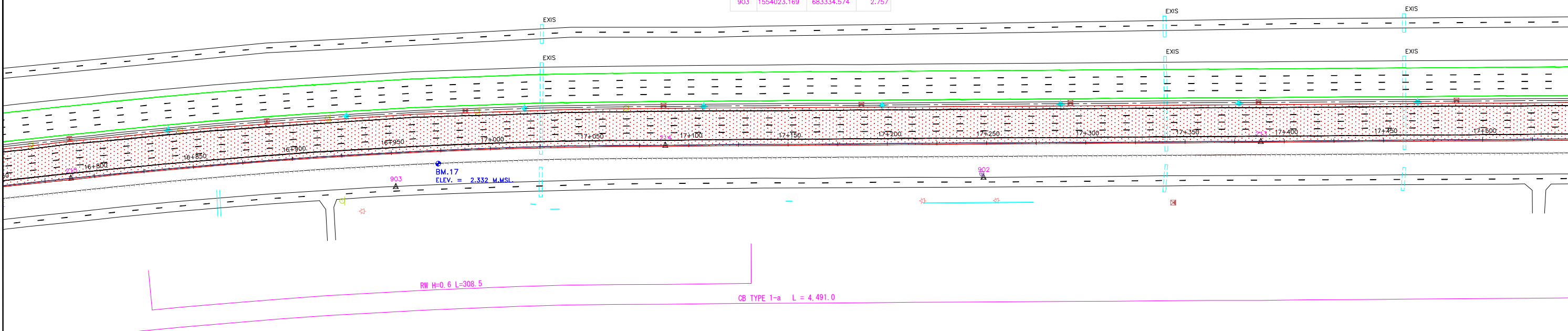
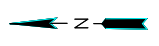
DWG. NO.
MW-30

SCALE :
V=1/50 H=1/1000

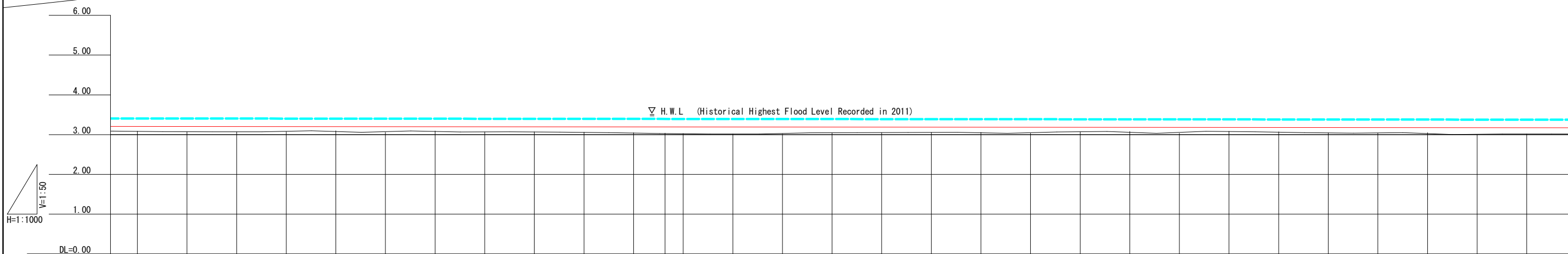
SHEET NO.
35

CONTROL POINTS :

STA.	N	E	ELEV.
213	1553587.310	683357.268	3.070
214	1553887.354	683355.340	3.027
902	1553727.028	683339.278	2.910
903	1554023.169	683334.574	2.757



RAISING PLAN - 1 SECTION

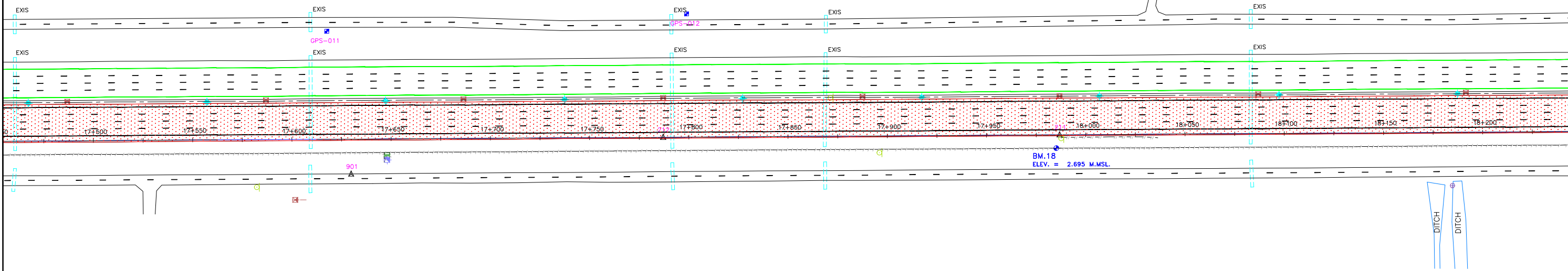
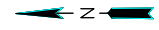


GRADE	i=0.004% L=6565.000																														
FORMATION HEIGHT	3.204	3.203	3.202	3.201	3.200	3.199	3.198	3.197	3.195	3.194	3.193	3.193	3.192	3.191	3.190	3.189	3.188	3.187	3.186	3.185	3.184	3.183	3.181	3.180	3.179	3.178	3.177	3.176	3.175	3.174	
EMBANKMENT	0.114	0.123	0.132	0.131	0.110	0.139	0.108	0.127	0.125	0.134	0.143	0.163	0.162	0.181	0.170	0.149	0.138	0.137	0.126	0.155	0.124	0.103	0.151	0.100	0.109	0.128	0.137	0.126	0.175	0.164	
GROUND HEIGHT	3.09	3.08	3.07	3.07	3.09	3.06	3.09	3.07	3.07	3.06	3.05	3.03	3.03	3.01	3.02	3.04	3.05	3.05	3.06	3.03	3.06	3.08	3.03	3.08	3.07	3.05	3.04	3.05	3.00	3.01	
DESIGN FLOOD LEVEL	3.405	3.404	3.403	3.402	3.401	3.400	3.399	3.398	3.397	3.396	3.395	3.394	3.393	3.392	3.391	3.390	3.389	3.388	3.387	3.386	3.385	3.384	3.383	3.382	3.381	3.380	3.378	3.377	3.376	3.375	
STATION	16+825	+850	+875	+899.391	+900	+925	+950	+975	17+0	+25	+50	+75	+90	+100	+125	+150	+175	+200	+225	+250	+275	+300	+325	+350	+375	+400	+425	+450	+475	+500	+525
HORIZONTAL CURVATURE	R=2864.779 L=281.457													R=∞ L=2641.893																	
SUPER ELEVATION														-2.5%																	

REV. NO.	DESCRIPTION	ENGINEER CHECKED	ENGINEER DATE	DOH CHECKED	DOH DATE	REV. NO.	APPROVED BY	<p>KINGDOM OF THAILAND MINISTRY OF TRANSPORT DEPARTMENT OF HIGHWAYS</p>	HIGHWAY ROUTE NO. 9	OWNER	PROJECT TITLE	<p>CTI ENGINEERING INTERNATIONAL CO., LTD. ORIENTAL CONSULTANTS CO., LTD. NIPPON KOEI CO., LTD. CTI ENGINEERING CO., LTD.</p>	DESIGNED BY	CHECKED BY	DATE	SCALE
									PLAN & PROFILE (25 / 43)	The Inter-City Motorways Division Department of Highways Ministry of Transport	The Preparatory Survey on the Rehabilitation Project of the Outer Bangkok Ring Road		SAGARA Hidetaka ROAD ENGINEER	WATANABE Ryohei CHIEF ENGINEER	AUGUST 2012	V=1/50 H=1/1000
									KM. 16+800 TO KM. 17+500							DWG. NO. MW-31

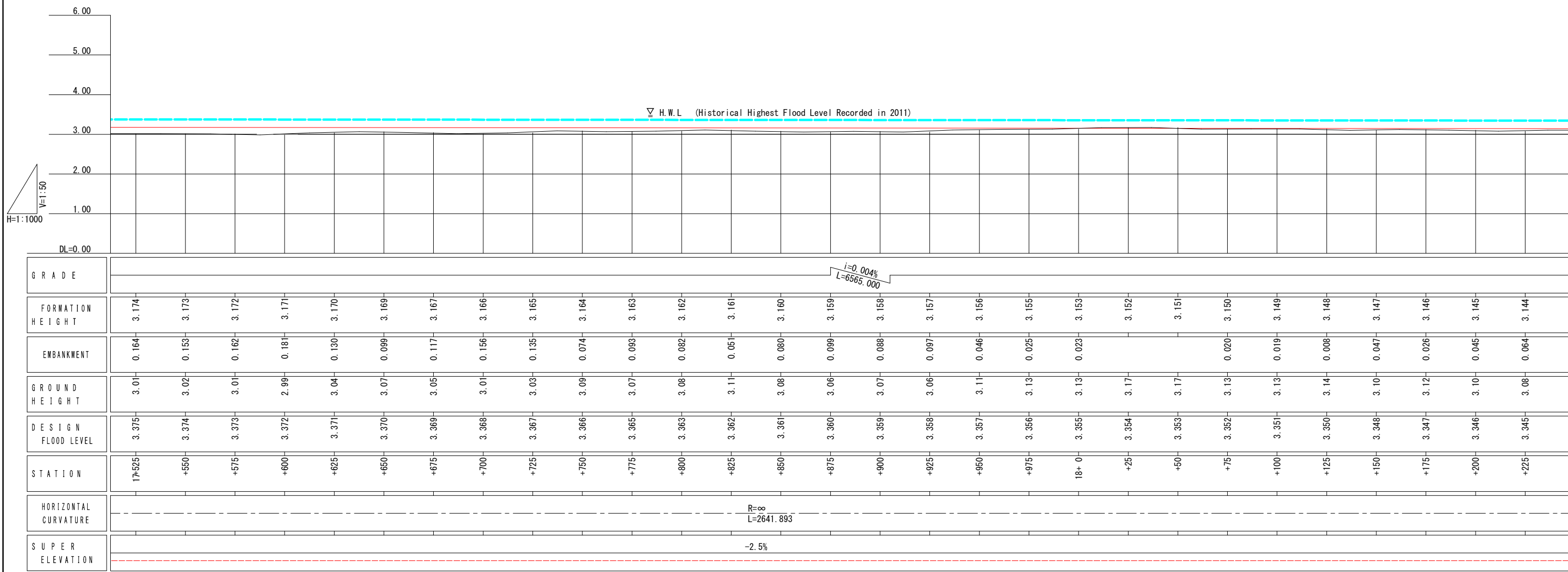
CONTROL POINTS :

STA.	N	E	ELEV.
211	1552988.718	683361.156	3.127
212	1553188.424	683359.869	3.078
901	1553345.620	683341.328	2.968
GPS-011	1553357.911	683413.464	2.608
GPS-012	1553176.610	683422.194	2.529



CB TYPE 1-a L = 4.491.0

RAISING PLAN - 1 SECTION



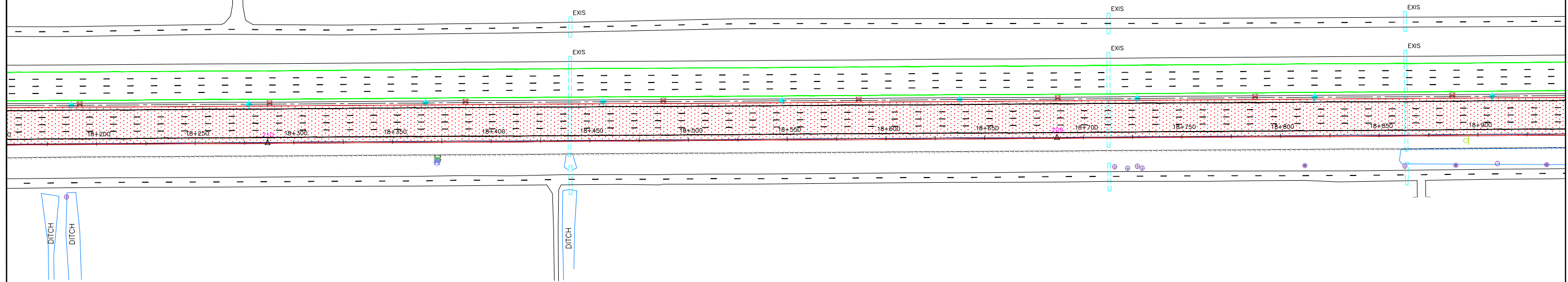
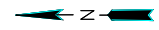
REV. NO.	DESCRIPTION	ENGINEER CHECKED	ENGINEER DATE	DOH CHECKED	DOH DATE	REV. NO.	APPROVED BY	HIGHWAY ROUTE NO. 9	OWNER	PROJECT TITLE	DESIGNED BY	CHECKED BY	DATE	SCALE
								KM. 17+500 TO KM. 18+200	The Inter-City Motorways Division Department of Highways Ministry of Transport	The Preparatory Survey on the Rehabilitation Project of the Outer Bangkok Ring Road	SAGARA Hidetaka ROAD ENGINEER	WATANABE Ryohei CHIEF ENGINEER	AUGUST 2012	V=1/50 H=1/1000
													DWG. NO. MW-32	SHEET NO. 37



CTI ENGINEERING INTERNATIONAL CO., LTD.
ORIENTAL CONSULTANTS CO., LTD.
NIPPON KOEI CO., LTD.
CTI ENGINEERING CO., LTD.

CONTROL POINTS :

STA.	N	E	ELEV.
209	1552288.848	683365.655	3.066
210	1552688.856	683363.101	3.113



CB TYPE 1-a L = 4.491.0

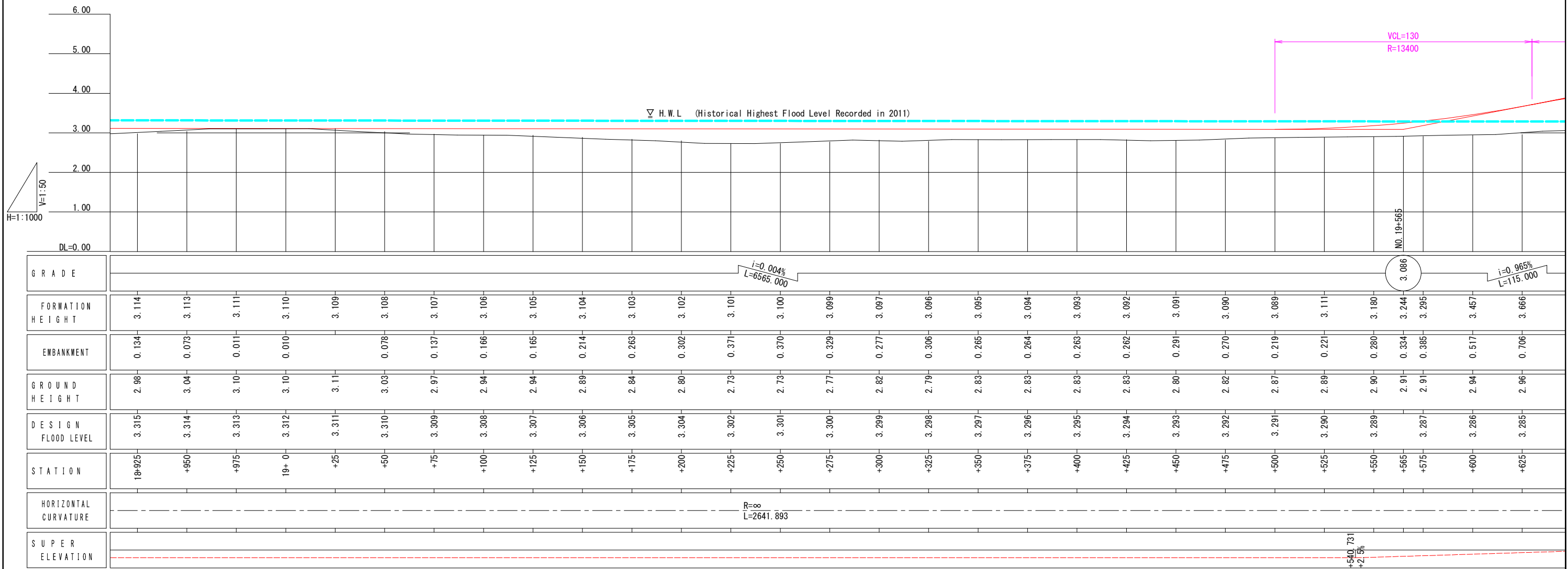
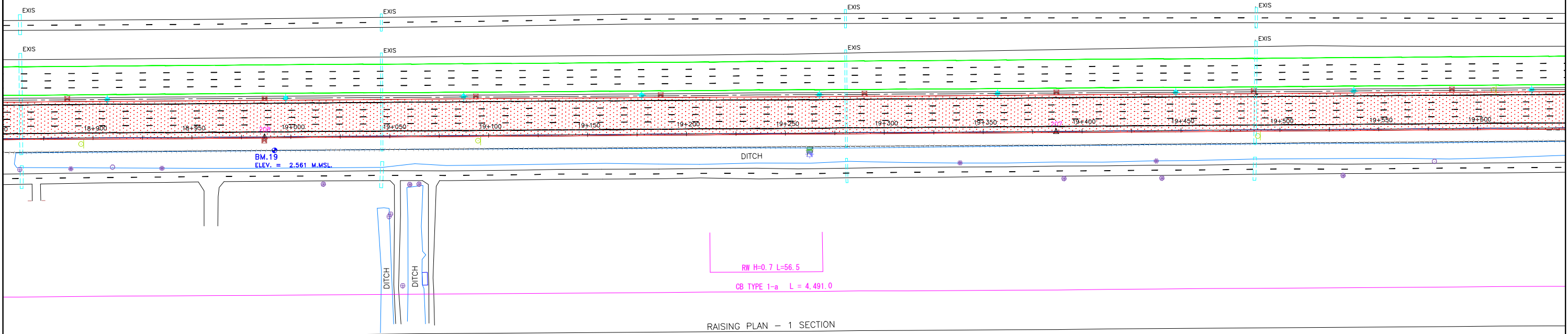
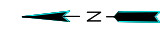
RAISING PLAN - 1 SECTION



REV. NO.	DESCRIPTION	ENGINEER CHECKED	ENGINEER DATE	DOH CHECKED	DOH DATE	REV. NO.	APPROVED BY	HIGHWAY ROUTE NO. 9	OWNER	PROJECT TITLE	DESIGNED BY	CHECKED BY	DATE	SCALE
								KM. 18+200 TO KM. 18+900	The Inter-City Motorways Division Department of Highways Ministry of Transport	The Preparatory Survey on the Rehabilitation Project of the Outer Bangkok Ring Road	SAGARA Hidetaka ROAD ENGINEER	WATANABE Ryohei CHIEF ENGINEER	AUGUST 2012	V=1/50 H=1/1000
								PLAN & PROFILE (27 / 43)		CTI ENGINEERING INTERNATIONAL CO., LTD. ORIENTAL CONSULTANTS CO., LTD. NIPPON KOEI CO., LTD. CTI ENGINEERING CO., LTD.		MW-33		SHEET NO.
								KM. 18+200 TO KM. 18+900						38

CONTROL POINTS :

STA.	N	E	ELEV.
207	1551588.683	683370.411	2.830
208	1551988.842	683367.690	3.100



REV. NO.	DESCRIPTION	ENGINEER CHECKED	ENGINEER DATE	DOH CHECKED	DOH DATE	REV. NO.	APPROVED BY	HIGHWAY ROUTE NO. 9	OWNER	PROJECT TITLE	DESIGNED BY	CHECKED BY	DATE	SCALE
								KM. 18+900 TO KM. 19+600	The Inter-City Motorways Division Department of Highways Ministry of Transport	The Preparatory Survey on the Rehabilitation Project of the Outer Bangkok Ring Road	SAGARA Hidetaka ROAD ENGINEER	WATANABE Ryohei CHIEF ENGINEER	AUGUST 2012	V=1/50 H=1/1000
													DWG. NO.	SHEET NO.
													MW-34	39



KINGDOM OF THAILAND
MINISTRY OF TRANSPORT
DEPARTMENT OF HIGHWAYS

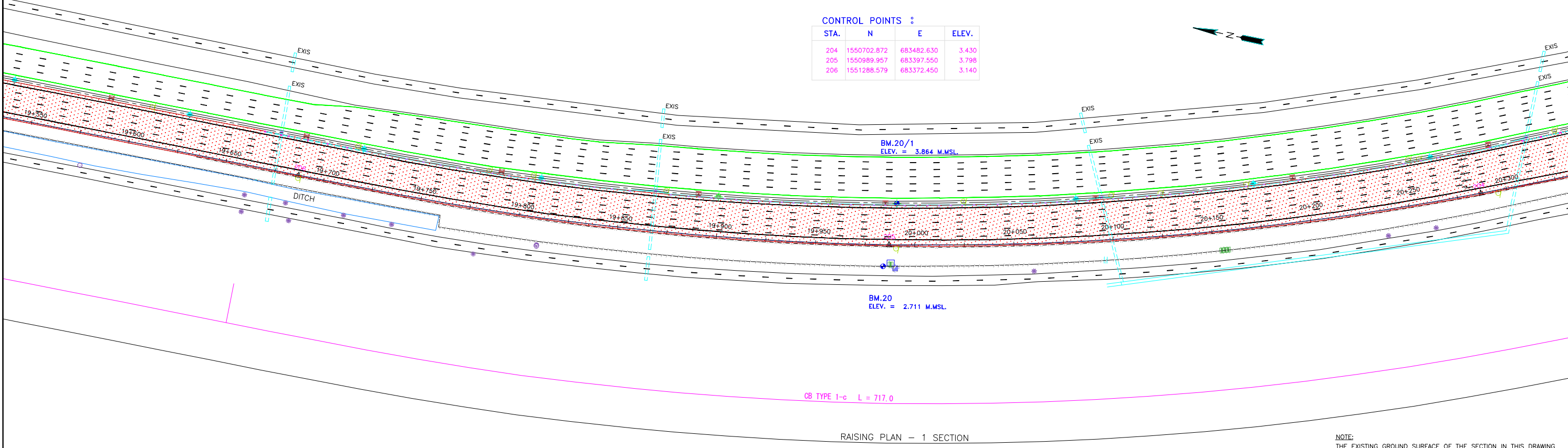
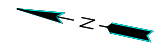
CTI ENGINEERING INTERNATIONAL CO., LTD.
ORIENTAL CONSULTANTS CO., LTD.
NIPPON KOEI CO., LTD.
CTI ENGINEERING CO., LTD.

DESIGNED BY: SAGARA Hidetaka
CHECKED BY: WATANABE Ryohei

DATE: AUGUST 2012
DWG. NO. MW-34
SCALE: V=1/50 H=1/1000
SHEET NO. 39

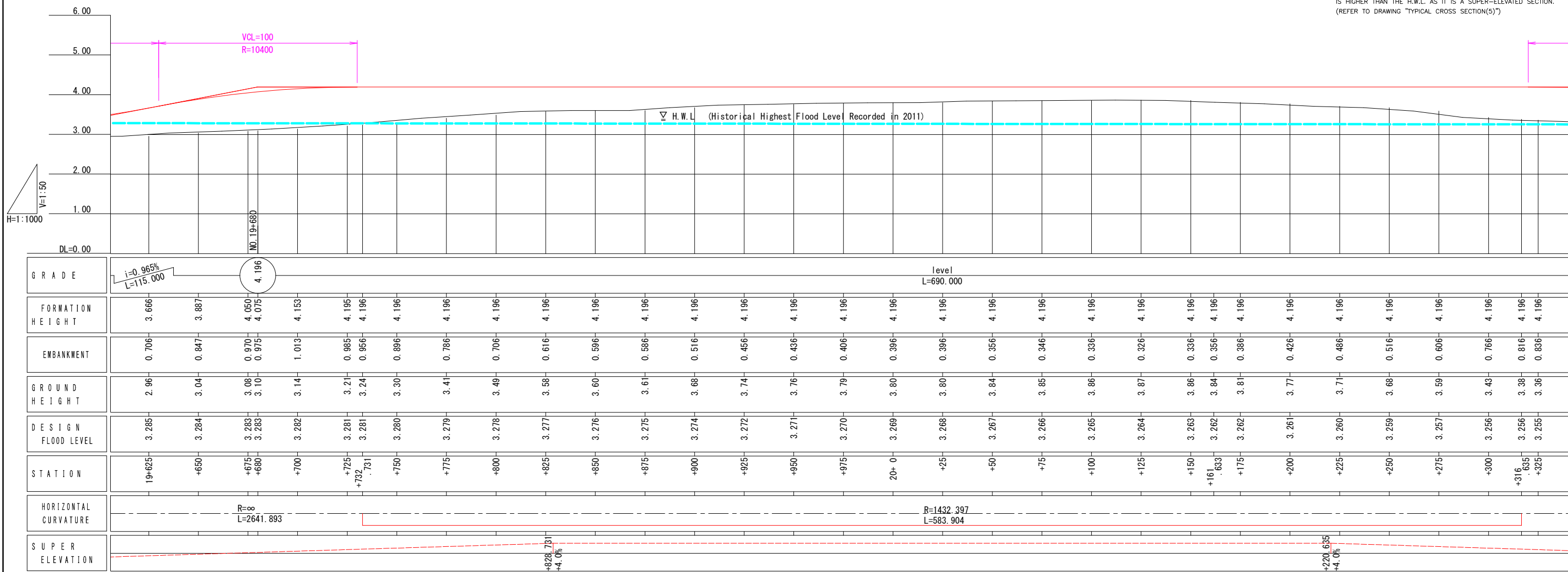
CONTROL POINTS :

STA.	N	E	ELEV.
204	1550702.872	683482.630	3.430
205	1550989.957	683397.550	3.798
206	1551288.579	683372.450	3.140



RAISING PLAN - 1 SECTION

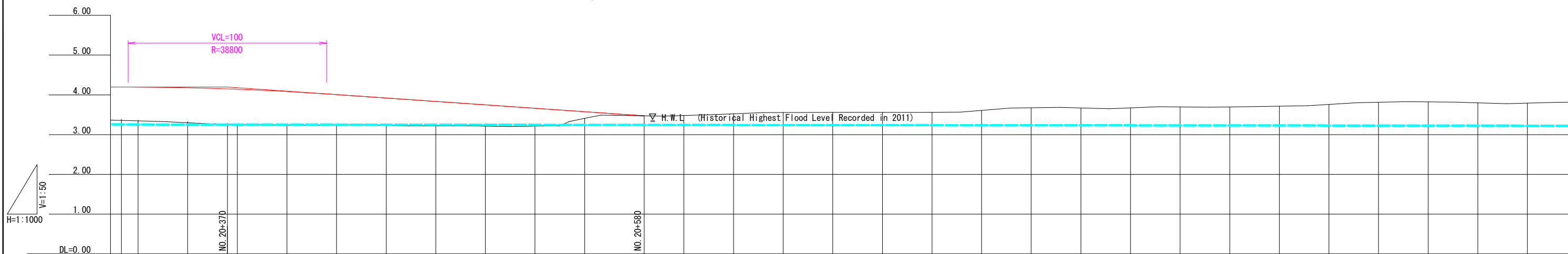
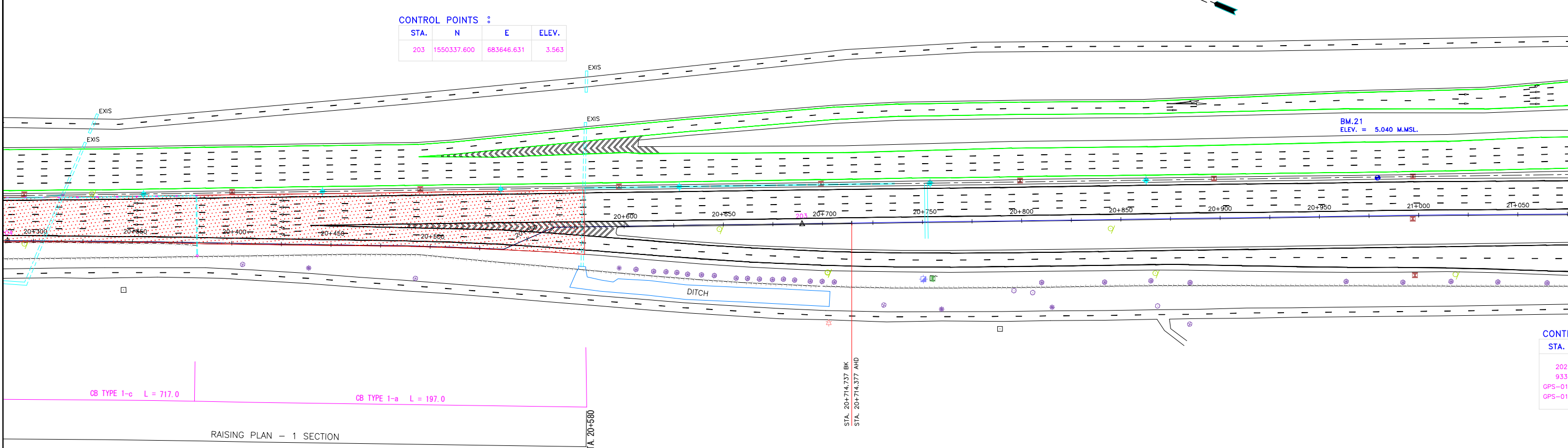
NOTE:
THE EXISTING GROUND SURFACE OF THE SECTION IN THIS DRAWING IS HIGHER THAN THE H.W.L. AS IT IS A SUPER-ELEVATED SECTION. (REFER TO DRAWING "TYPICAL CROSS SECTION(5)")



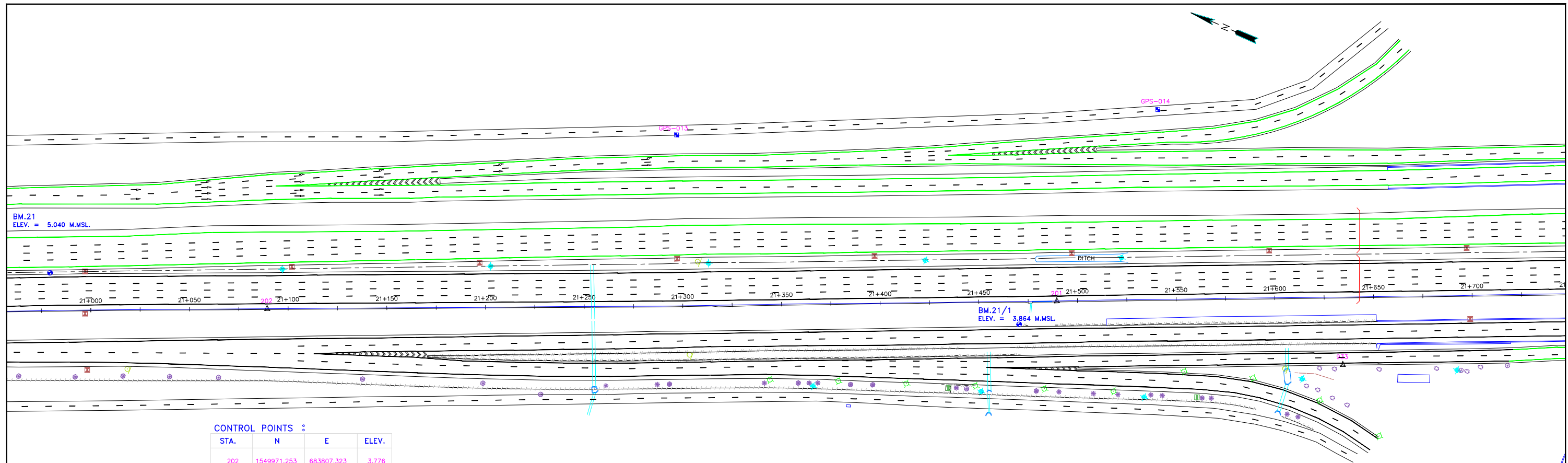
REV. NO.	DESCRIPTION	ENGINEER CHECKED	ENGINEER DATE	DOH CHECKED	DOH DATE	REV. NO.	APPROVED BY	HIGHWAY ROUTE NO. 9	OWNER	PROJECT TITLE	DESIGNED BY	CHECKED BY	DATE	SCALE
								KM. 19+600 TO KM. 20+300	The Inter-City Motorways Division Department of Highways Ministry of Transport	The Preparatory Survey on the Rehabilitation Project of the Outer Bangkok Ring Road	SAGARA Hidetaka ROAD ENGINEER	WATANABE Ryohei CHIEF ENGINEER	AUGUST 2012	V=1/50 H=1/1000
													DWG. NO.	SHEET NO.
													MW-35	40

CONTROL POINTS :

STA.	N	E	ELEV.
203	1550337.600	683646.631	3.563

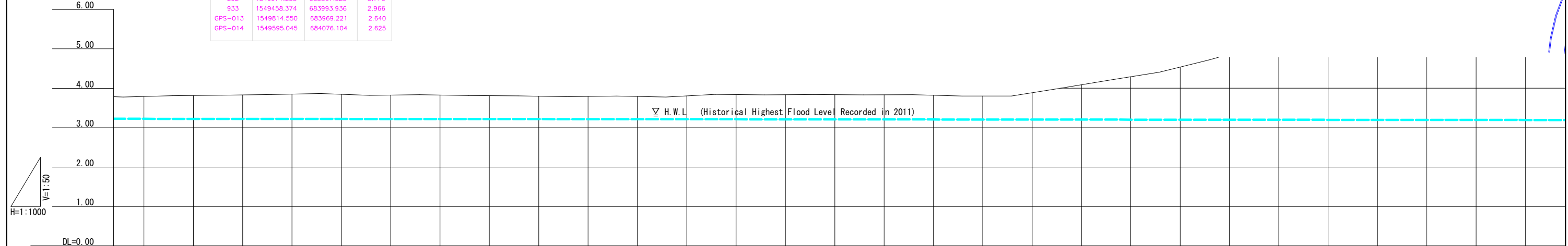


GRADE	level L=690.000	4.196	4.181	4.153	4.145	4.087	4.026	4.009	3.924	3.753	3.668	3.583	3.498	3.481	EXISTING																		
FORMATION HEIGHT		4.196	4.196	4.181	4.145	4.087	4.026	4.009	3.924	3.753	3.668	3.583	3.498	3.481	EXISTING																		
EMBANKMENT		0.816	0.836	0.851	0.873	0.875	0.847	0.786	0.769	0.704	0.523	0.488	0.363	0.008	0.001	NONE																	
GROUND HEIGHT		3.38	3.36	3.33	3.28	3.27	3.24	3.24	3.24	3.22	3.23	3.20	3.22	3.49	3.48	3.48	3.52	3.56	3.56	3.56	3.56	3.61	3.67	3.67	3.67	3.70	3.70	3.72	3.76	3.82	3.82	3.80	3.79
DESIGN FLOOD LEVEL		3.256	3.255	3.254	3.253	3.252	3.251	3.250	3.249	3.248	3.247	3.246	3.245	3.245	3.244	3.243	3.241	3.240	3.239	3.238	3.237	3.236	3.235	3.234	3.233	3.232	3.231	3.230	3.229	3.228	3.226	3.225	
STATION		+316	20+325	+350	+370	+375	+400	+425	+450	+475	+500	+525	+550	+575	+580	+600	+625	+650	+675	+700	+725	+750	+775	+800	+825	+850	+875	+900	+925	+950	+975	21+0	+25
HORIZONTAL CURVATURE		$R=\infty$ L=263.367															EXISTING																
SUPER ELEVATION																	EXISTING																



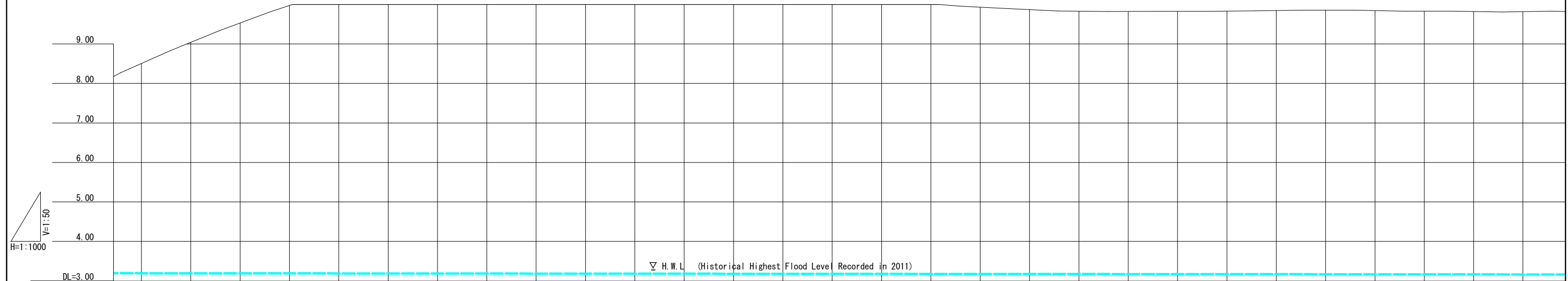
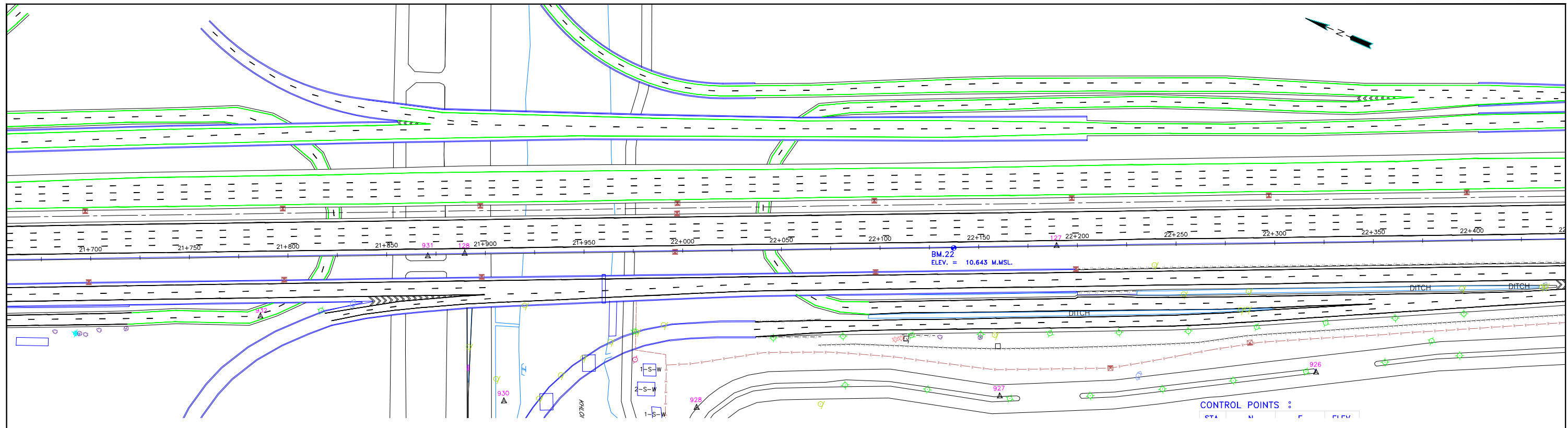
CONTROL POINTS :

STA.	N	E	ELEV.
202	1549971.253	683807.323	3.776
933	1549458.374	683993.936	2.966
GPS-013	1549814.550	683969.221	2.640
GPS-014	1549595.045	684076.104	2.825



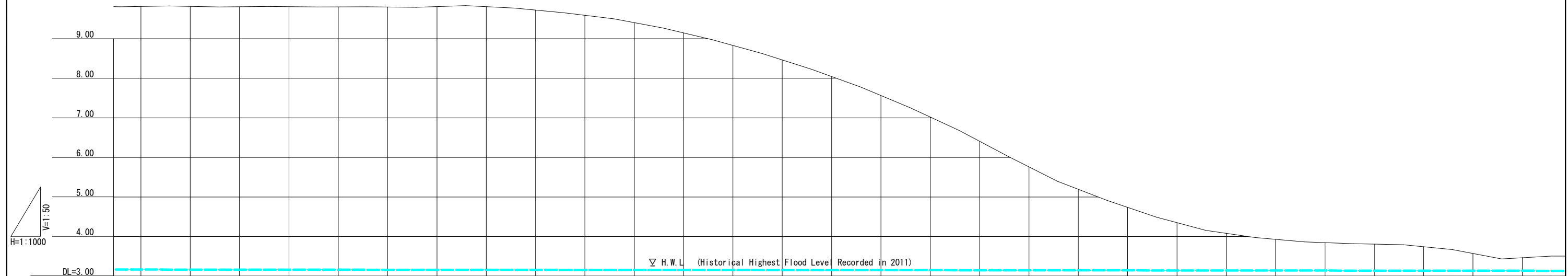
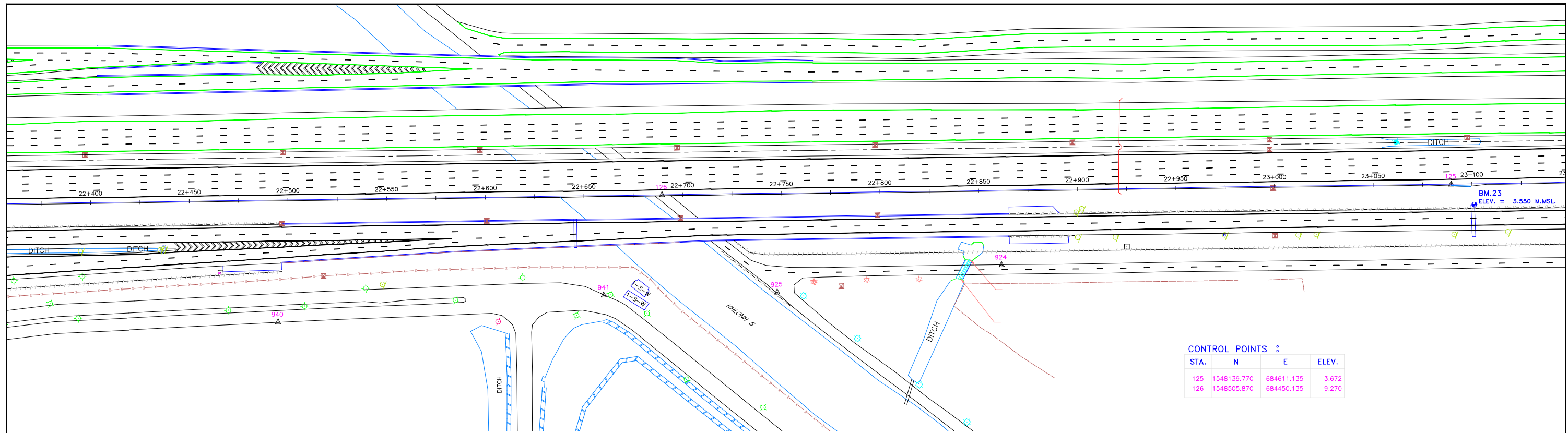
GRADE	EXISTING																												
FORMATION HEIGHT	EXISTING																												
EMBANKMENT	NONE																												
GROUND HEIGHT	3.79	3.82	3.83	3.85	3.85	3.83	3.83	3.81	3.80	3.79	3.79	3.81	3.84	3.84	3.84	3.83	3.82	3.80	3.89	4.09	4.29	4.54	4.87	5.29	5.83	6.47	7.20	7.89	8.51
DESIGN FLOOD LEVEL	3.225	3.224	3.223	3.222	3.221	3.220	3.219	3.218	3.217	3.216	3.215	3.214	3.213	3.211	3.210	3.209	3.208	3.207	3.206	3.205	3.204	3.203	3.202	3.201	3.200	3.199	3.198	3.196	3.195
STATION	21+25	+50	+75	+100	+125	+150	+175	+200	+225	+250	+275	+300	+325	+350	+375	+400	+425	+450	+475	+500	+525	+550	+575	+600	+625	+650	+675	+700	+725
HORIZONTAL CURVATURE	EXISTING																												
SUPER ELEVATION	EXISTING																												

REV. NO.	DESCRIPTION	ENGINEER CHECKED	ENGINEER DATE	DOH CHECKED	DOH DATE	REV. NO.	APPROVED BY	<p>KINGDOM OF THAILAND MINISTRY OF TRANSPORT DEPARTMENT OF HIGHWAYS</p>	HIGHWAY ROUTE NO. 9	OWNER	PROJECT TITLE		DESIGNED BY	CHECKED BY	DATE	SCALE
									PLAN & PROFILE (31 / 43)	The Inter-City Motorways Division Department of Highways Ministry of Transport	The Preparatory Survey on the Rehabilitation Project of the Outer Bangkok Ring Road		SAGARA Hidetaka ROAD ENGINEER	WATANABE Ryohei CHIEF ENGINEER	AUGUST 2012	V=1/50 H=1/1000
									KM. 21+000 TO KM. 21+700						DWG. NO. MW-37	SHEET NO. 42



GRADE	EXISTING																												
FORMATION HEIGHT	EXISTING																												
EMBANKMENT	NONE																												
GROUND HEIGHT	8.51	9.04	9.53	9.97	10.35	10.64	10.84	10.97	11.04	11.08	11.07	10.97	10.83	10.66	10.41	10.18	10.02	9.93	9.87	9.83	9.82	9.82	9.83	9.84	9.85	9.84	9.83	9.82	9.82
DESIGN FLOOD LEVEL	3.195	3.194	3.193	3.192	3.191	3.190	3.189	3.188	3.187	3.186	3.185	3.184	3.183	3.181	3.180	3.179	3.178	3.177	3.176	3.175	3.174	3.173	3.172	3.171	3.170	3.169	3.168	3.167	3.165
STATION	21+725	+750	+775	+800	+825	+850	+875	+900	+925	+950	+975	22+0	+25	+50	+75	+100	+125	+150	+175	+200	+225	+250	+275	+300	+325	+350	+375	+400	+425
HORIZONTAL CURVATURE	EXISTING																												
SUPER ELEVATION	EXISTING																												

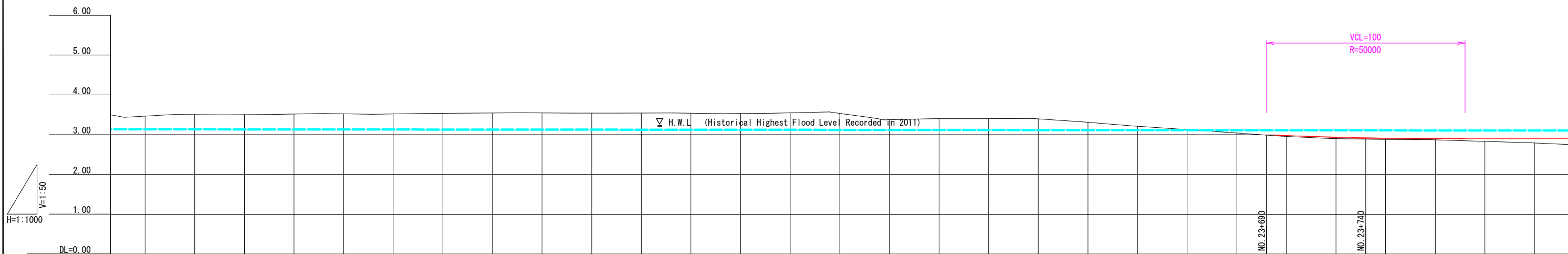
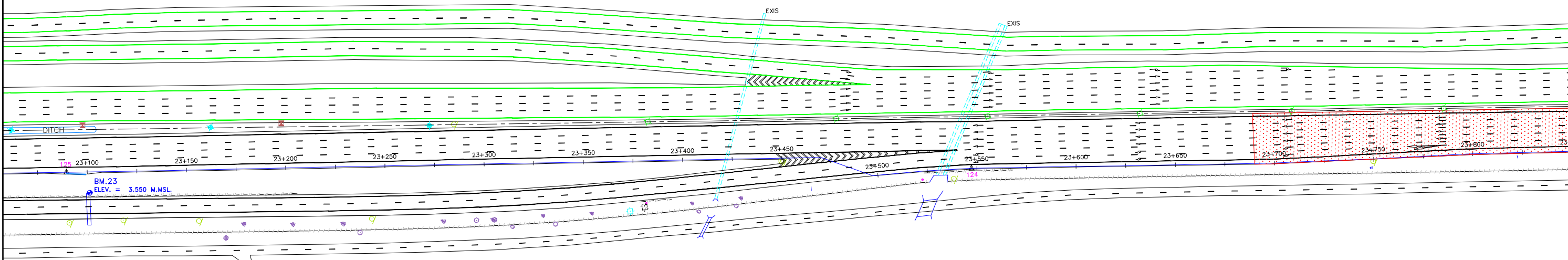
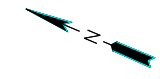
REV. NO.	DESCRIPTION	ENGINEER CHECKED	ENGINEER DATE	DOH CHECKED	DOH DATE	REV. NO.	APPROVED BY	 KINGDOM OF THAILAND MINISTRY OF TRANSPORT DEPARTMENT OF HIGHWAYS	HIGHWAY ROUTE NO. 9	OWNER	PROJECT TITLE	 CTI ENGINEERING INTERNATIONAL CO., LTD. ORIENTAL CONSULTANTS CO., LTD. NIPPON KOEI CO., LTD. CTI ENGINEERING CO., LTD.	DESIGNED BY	CHECKED BY	DATE	SCALE
									PLAN & PROFILE (32 / 43) KM. 21+700 TO KM. 22+400	The Inter-City Motorways Division Department of Highways Ministry of Transport	The Preparatory Survey on the Rehabilitation Project of the Outer Bangkok Ring Road		SAGARA Hidetaka ROAD ENGINEER	WATANABE Ryohei CHIEF ENGINEER	AUGUST 2012	V=1/50 H=1/1000
															DWG. NO.	SHEET NO.
															MW-38	43



GRADE	EXISTING																												
FORMATION HEIGHT	EXISTING																												
EMBANKMENT	NONE																												
GROUND HEIGHT	9.82	9.82	9.81	9.81	9.80	9.80	9.81	9.81	9.72	9.59	9.41	9.15	8.83	8.46	8.04	7.56	7.02	6.41	5.76	5.19	4.74	4.35	4.08	3.93	3.84	3.81	3.74	3.57	3.47
DESIGN FLOOD LEVEL	3.165	3.164	3.163	3.162	3.161	3.160	3.159	3.158	3.157	3.156	3.155	3.154	3.153	3.152	3.150	3.149	3.148	3.147	3.146	3.145	3.144	3.143	3.142	3.141	3.140	3.139	3.138	3.137	3.135
STATION	22+425	+450	+475	+500	+525	+550	+575	+600	+625	+650	+675	+700	+725	+750	+775	+800	+825	+850	+875	+900	+925	+950	+975	23+0	+25	+50	+75	+100	+125
HORIZONTAL CURVATURE	EXISTING																												
SUPER ELEVATION	EXISTING																												

CONTROL POINTS :

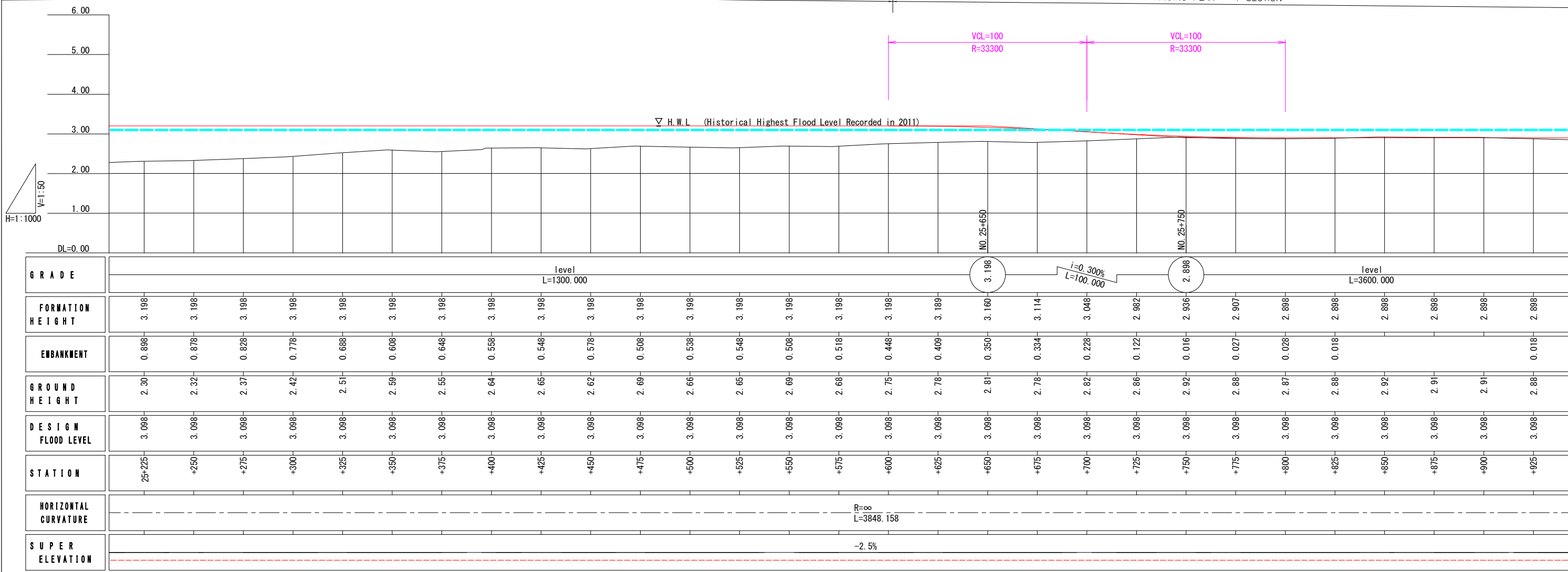
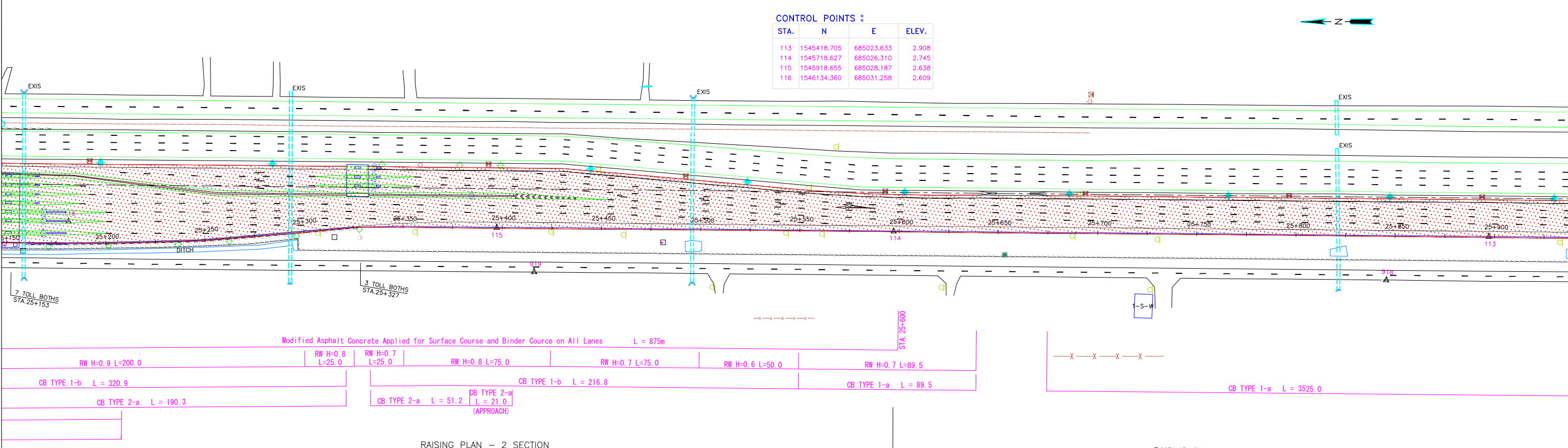
STA.	N	E	ELEV.
124	1547720.701	684790.926	3.404



GRADE	EXISTING																				2.998	i=0.200% L=50.000		2.898	level L=1300.000						
FORMATION HEIGHT	EXISTING																				2.998	2.979	2.940	2.923	2.914	2.900	2.898	2.898			
EMBANKMENT	NONE																					0.019	0.040	0.033	0.034	0.020	0.058	0.098			
GROUND HEIGHT	3.47	3.50	3.50	3.52	3.52	3.52	3.54	3.54	3.55	3.54	3.54	3.53	3.55	3.54	3.38	3.40	3.40	3.40	3.31	3.21	3.13	3.04	3.00	2.96	2.90	2.88	2.88	2.84	2.80		
DESIGN FLOOD LEVEL	3.135	3.134	3.133	3.132	3.131	3.130	3.129	3.128	3.127	3.126	3.125	3.124	3.123	3.122	3.120	3.119	3.118	3.117	3.116	3.115	3.114	3.113	3.112	3.111	3.111	3.110	3.109	3.108	3.107	3.105	
STATION	23+125	+150	+175	+200	+225	+250	+275	+300	+325	+350	+375	+400	+425	+450	+475	+500	+525	+550	+575	+600	+625	+650	+675	+690	+700	+725	+740	+750	+775	+800	+825
HORIZONTAL CURVATURE	EXISTING																						R=∞ L=210.603								
SUPER ELEVATION	EXISTING																				-2.5%		+7.89.603 -2.5%								

CONTROL POINTS :

STA.	N	E	ELEV.
113	1545418.705	685023.633	2.908
114	1545718.627	685026.310	2.745
115	1545918.655	685028.187	2.638
116	1546134.360	685031.258	2.609



REV. NO.	DESCRIPTION	ENGINEER CHECKED	ENGINEER DATE	DOH CHECKED	DOH DATE	REV. NO.	APPROVED BY		HIGHWAY ROUTE NO. 9	OWNER	PROJECT TITLE		DESIGNED BY	CHECKED BY	DATE:	SCALE:
									PLAN & PROFILE (37/43)	The Inter-City Motorways Division Department of Highways Ministry of Transport	The Preparatory Survey on the Rehabilitation Project of the Outer Bangkok Ring Road		SAGARA Hidetaka ROAD ENGINEER	WATANABE Ryohei CHIEF ENGINEER	AUGUST 2012	V=1/50 H=1/1000
									KM. 25+200 TO KM. 25+900						DWG. NO.	SHEET NO.

MW-43 48

